

WHAT IS CLAIMED IS:

1. An optical communication system for transmitting signal light including a plurality of signal channels within a signal wavelength band from a first point to a second point, said optical communication system comprising:

an optical transmission line, including a plurality of Raman amplification optical fibers, for transmitting said signal light from said first point to said second point, each of said Raman amplification optical fibers Raman-amplifying said signal light when Raman amplification pumping light is supplied thereto; and

respective pumping light suppliers prepared so as to correspond to said plurality of Raman amplification optical fibers, each of said pumping light suppliers supplying Raman amplification pumping light to said Raman amplification optical fiber corresponding thereto;

wherein two Raman amplification optical fibers selected from said plurality of Raman amplification optical fibers differ from each other in at least one of the wavelength at which a gain of Raman amplification becomes the highest, and the number of channels at which said gain of Raman amplification is maximum.

2. An optical communication system according to claim 1, wherein respective pumping light suppliers corresponding to said selected two Raman amplification optical fibers differ from each other in the number of pumping light sources

included therein.

3. An optical communication system according to claim
1, wherein a value obtained by integrating the absolute value
of difference between respective gain spectra of Raman
amplification of said selected two Raman amplification
optical fibers with respect to wavelength is at least 7.5
dB·nm.